

A new Mygalomorph Spider belonging to the Genus *Hexathele* Ausserer

By

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The genus *Hexathele* Ausserer (1871) contains only five known species. The genotype, *Hexathele hochstetteri* Auss., was collected in New Zealand by the Novara Expedition. Since then three other species have been recorded from that country, namely, *H. petreii* Goyen (1886), *H. huttoni* Hogg (1908), and *H. websteri* Hogg (1908). A fifth species, *H. montanus* Hickman, was recorded from Tasmania by me in 1926.

In referring to *H. hochstetteri* and *H. petreii*, Hogg (1901) remarks, 'Except a discrepancy in the eyes I can find no difference in the descriptions of these two species'. Goyen's description of the male of *H. petreii* is so brief and vague that it gives little help in establishing the identity of the species. His description of the female, however, is definite in regard to the dentition of the chelicerae and the structure of the tarsal claws. He states (1886) that the groove of the falces has a large number of teeth on each side, and that the inferior tarsal claw is 'much bent but without teeth'. In regard to *H. hochstetteri*, Ausserer (1871) remarks 'die Afterklaue ist mehrzahnig', and in his diagram shows the inferior tarsal claw of the first pair of legs as having three teeth. Hogg apparently overlooked these features until 1908, when he received further specimens of the genus from New Zealand, and was able to recognize as a new species (*H. huttoni*) a form which he had previously (1901) regarded as identical with the genotype.

Rainbow (1920, p. 85) has tentatively recorded *Hexathele hochstetteri* as occurring in Papua, but thinks it quite possible that 'the specimens may have accidentally found their way into the bottle of Papuan material'.

E. Simon (1888, p. 222) described a spider from Chili under the name of *Hexathele cinereo-pilosa*, but subsequently made it the genotype of a new genus, *Scotinoecus* (1892).

The present paper gives a synopsis of the species of *Hexathele*, followed by a description of a new species, *H. fentoni*, from Tasmania.

Family DIPLURIDAE

Genus *Hexathele* Ausserer, 1871

KEY TO THE FEMALES OF THE SPECIES OF HEXATHELE

1. Inferior tarsal claw with teeth 2
 Inferior tarsal claw without teeth 3
2. Tarsi of first and second pairs of legs armed with spines. Cephalothorax black *H. montanus* Hickman
 Tarsi of first and second pairs of legs devoid of spines. Cephalothorax red-brown *H. hochstetteri* Ausserer
3. Both margins of cheliceral furrow with teeth *H. petreii* Goyen
 Retromargin without teeth 4
4. Front median eyes once their diameter apart *H. websteri* Hogg
 Front median eyes less than their diameter apart 5
5. Abdomen dark-grey without pattern *H. huttoni* Hogg
 Abdomen yellow-brown with pronounced pattern *H. fentoni*, sp. nov.

Hexathele fentoni, sp. nov.

Male. Holotype.

	mm.
Total length (excluding chelicerae and spinnerets)	11.0
Length of cephalothorax	5.2
Breadth of cephalothorax	4.3
Length of abdomen	5.5
Breadth of abdomen	3.5

	Femur	Patella	Tibia	Meta-tarsus	Tarsus	Total
	mm.	mm.	mm.	mm.	mm.	mm.
Leg 1	4.3	2.2	3.0	3.4	2.4	15.3
2	3.9	2.0	2.9	5.6	2.4	14.8
3	3.5	1.7	2.3	3.6	2.4	13.5
4	4.7	2.0	3.2	4.2	2.4	16.5
Palpi	2.9	1.4	2.0	—	1.0	7.3

Width of first patella at 'knee' 0.840 mm. Tibial index 16.1.

Width of fourth patella at 'knee' 0.812 mm. Tibial index 15.6.

Carapace. Ovate, truncate in front. Rear margin slightly indented. Surface glabrous except for a median longitudinal row of black hairs extending from ocular tubercle to fovea. Lateral margins fringed with coarse black hairs. Radial grooves distinct. Thoracic fovea 3.2 mm. from front margin, very slightly recurved. Cephalic region moderately high. Clypeus equal to slightly more than half the diameter of AME. The articular membrane between the base of the chelicerae and the carapace is faintly marked with black patches.

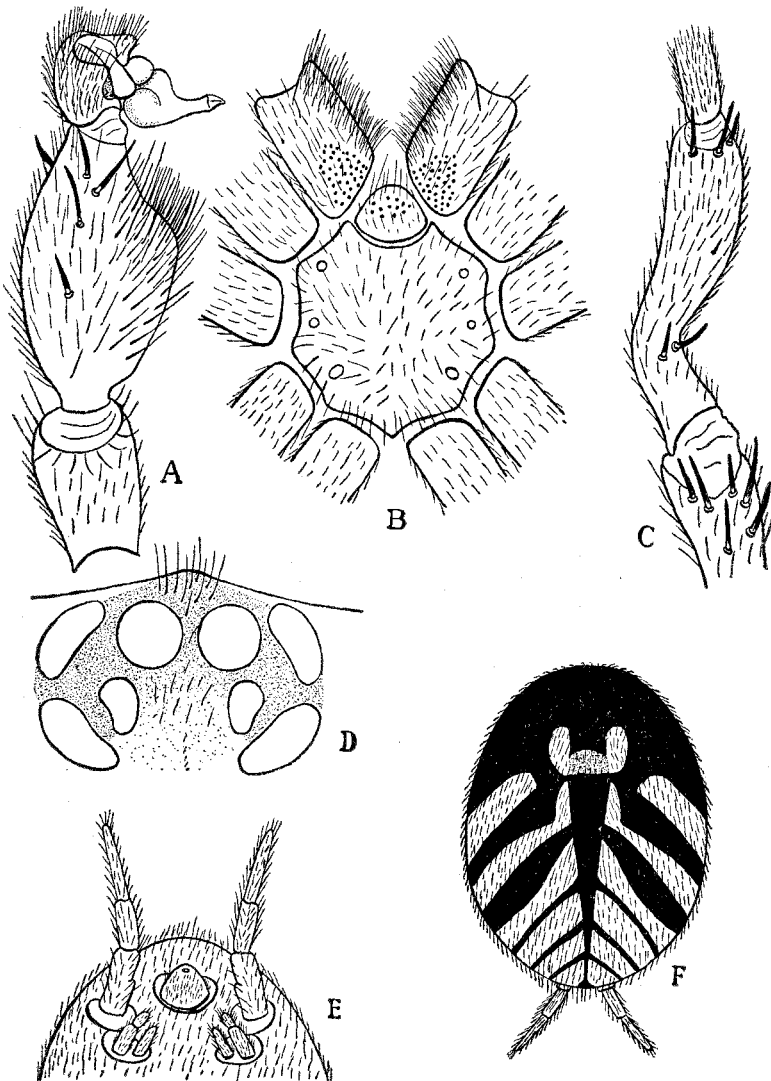


Fig. 1.—*Hexathele fentoni*, sp. n.

A.—Ventral view of left palpus of male. B.—Sternum, labium, and maxillae of male. C.—Ventral view of left metatarsus of first pair of legs of male. D.—Eye-group of male. E.—Spinnerets of male. F.—Dorsal view of abdomen of female, showing pattern.

Eyes. The eye-group is wider than long in ratio 19 : 11. Ocular tubercle pigmented with black between the eyes. In front of the eye-group are nine or ten stiff curved bristles. Anterior row of eyes straight by anterior edges; posterior row recurved. Ratio of eyes AME : ALE : PME : PLE = 5 : 6 : 3.5 : 6. AME are separated from each other by 2/5 of their diameter and from ALE by 1/5 of the diameter of the AME. The PME are separated from each other by 7/5 of the diameter of the AME. The laterals are separated by 2/5 of the diameter of the AME. (Text-fig. 1. D.)

Chelicerae. Basal segment 2.3 mm. long, dark-brown. Dorsal and retrolateral surfaces glabrous. Front and dorso-prolateral margin clothed with bristles. Rastellum absent. Fang 2.9 mm. long, slender, sharp, and curved. Promargin of furrow with nine large and three or four minute black teeth. Retromargin with a scopula, but without teeth.

Labium. Broader than long. Rounded in front. Clothed with long hairs and armed with 13 small cuspules. The groove separating the labium from the sternum is very shallow and dark-brown.

Maxillae. 1.7 mm. long by 1.0 wide. Provided with a scopula of fine red hairs and about 38 small cuspules on the basal third. (Text-fig. 1. B.)

Sternum. Light-brown, shield-shaped, longer than wide in ratio 40 : 38. Thinly clothed with coarse black bristles, and marked with three pairs of sigilla. The first and second pairs of sigilla are small and circular, the third pair larger and oval, separated from the margin by their length. (Text-fig. 1. B.)

Legs. 4. 1. 2. 3. Light-brown. Clothed with black hairs and bristles, but without a definite scopula. Trichobothria on all tarsi, metatarsi, and tibiae. Metatarsi of first pair of legs dark-brown and sinuous (Text-fig. 1. C). Tibiae normal. Upper tarsal claws with a row of 7 or 8 teeth crossing the claw obliquely. The inferior claw is small and devoid of teeth.

Palpi. Light-brown, clothed with black hairs and bristles. Genital bulb pyriform, ending in a short, twisted, lance-shaped style. Tibia dilated and furnished with numerous coarse bristles on the swollen part. (Text-fig. 1. A.)

Spines.—*First leg.* Femur: dorsal 1-1-1-1-1-1-1, prolateral 1-1, retrolateral 0, ventral 0. Patella: dorsal 0, prolateral 1-1, retrolateral 0, ventral 2-2. Tibia: dorsal 0, prolateral 1-1, retrolateral 0, ventral 2-1-2-1-3. Metatarsus: ventral 2-1-3, elsewhere 0. Tarsus: ventral 1-1, elsewhere 0. *Second leg.* Femur: dorsal 1-1-1-1-1-1-1, prolateral 1-1-1-1, retrolateral 1-1-1-1, ventral 0. Patella: dorsal 0, prolateral 1-1, retrolateral 0, ventral 2r. Tibia: dorsal 0, prolateral 1-1, retrolateral 0, ventral 1-2-1-2-3. Metatarsus: dorsal 1, ventral 2-1-2-1-4, elsewhere 0. Tarsus: dorsal 0, prolateral 1, retrolateral 1-1, ventral 0. *Third leg.* Femur: dorsal 2-2-2-2-2, prolateral 1-1, elsewhere 0. Patella: dorsal 0, prolateral 1-2, retrolateral 1-1, ventral

1r. Tibia: dorsal 1-1-1, prolateral 1-1-1-1-1, retrolateral 1-1-1, ventral 3-2-1-3. Metatarsus: dorsal 1, prolateral 1-1-1-1-1, retrolateral 1-1-1, ventral 2-2-1-3. Tarsus: dorsal 0, prolateral 1-1-1-1, retrolateral 1-1-1-1, ventral 1-1. *Fourth leg.* Femur: dorsal 2-1-1-1-1-1-1, elsewhere 0. Patella: ventral 1r, elsewhere 0. Tibia: dorsal 1 basal, prolateral 1-1, retrolateral 1-1-1, ventral 3-1-3-3. Metatarsus: dorsal 0, prolateral 1-1-1, retrolateral 1-1-1, ventral 2-1-1-2-1-1-4. Tarsus: dorsal 0, prolateral 1-1-1-1-1-1, retrolateral 1-1-1-1-1-1, ventral 1-1. *Palpus.* Femur: dorsal 1-1-1, elsewhere 0. Patella: prolateral 1, elsewhere 0. Tibia: retrolateral 1-1-2, elsewhere 0. Tarsus 0.

Abdomen. Brown. Clothed with black bristles anteriorly and dorsally. Sides and ventral surface clothed with fine black hairs. Dorsal surface marked with five pairs of dark oblique stripes and a median stripe as in the female. (Text-fig. 1. F.)

Spinnerets. Six. Yellowish-brown, clothed with black hairs. Posterior pair 3.5 mm. long, four-jointed above and three-jointed below, separated at the base by 1.5 mm. The other four spinnerets are in a straight line immediately in front of the posterior pair. The outer pair are two-jointed and 1.0 mm. long. The inner pair are one-jointed and 0.6 mm. long. The inner pair are separated from each other by 0.7 mm. Anal tubercle, yellowish, very large, and projecting between the posterior spinnerets. (Text-fig. 1. E.)

Female. Allotype.

		mm.					
Total length (excluding chelicerae and spinnerets)		15.0					
Length of cephalothorax		7.0					
Breadth of cephalothorax		4.8					
Length of abdomen		8.0					
Breadth of abdomen		5.8					
		Femur	Patella	Tibia	Meta-	Tarsus	Total
		mm.	mm.	mm.	tarsus	mm.	mm.
Leg							
1	.....	4.6	2.3	2.8	2.8	2.0	14.5
2	.....	3.9	2.2	2.4	2.6	1.8	12.9
3	.....	3.4	1.8	1.8	2.5	1.7	11.2
4	.....	4.6	2.3	2.8	3.1	1.7	14.5
Palpi	.....	2.8	1.4	1.9	—	1.8	7.9

Width of first patella at 'knee' 0.986 mm. Tibial index 19.

Width of fourth patella at 'knee' 0.870 mm. Tibial index 17.

Carapace. Ovate, chestnut-brown. Front margin truncate, rear margin indented. Sides fringed with a few short hairs. Radial grooves distinct and slightly darker in colour than the rest of the carapace. Thoracic fovea deep and almost straight. Surface of carapace smooth and glabrous, except for a median row of black hairs extending from eye-group to fovea. Clypeus narrow. Articular membrane between the carapace and chelicerae suffused with black.

Eyes. Eye-tubercle moderately high. Eye-group wider than long in ratio 23 : 12. Space between the eyes black. A group of about twelve bristles in front of the eyes and a smaller group between the

posterior median eyes. Anterior row of eyes straight by anterior edges, posterior row recurved. Ratio of eyes AME : ALE : PME : PLE = 6 : 7 : 4 : 6. AME separated from each other by half their diameter and from ALE by $1/6$ their diameter. PME separated from each other by $1\frac{1}{4}$ of their long axis and from PLE by $1/4$ of their long axis. Laterals separated by $2/7$ of the long diameter of ALE.

Chelicerae. Basal joint 3.5 mm. long and almost black. The dorsal surface smooth and glabrous. Anterior surface clothed with black bristles. Rastellum absent. Promargin of furrow with a row of 12 teeth, of which the distal three are the smallest. Retromargin with a reddish scopula, but without teeth. A row of four minute teeth in the basal third of furrow. Fang long and well curved.

Labium. Convex, wider than long in ratio 23 : 15. Clothed with long fine bristles and armed with a group of 21 cuspules. Sternal suture procurved.

Maxillae. With parallel sides. Distal inner angle slightly produced. Scopula red. Surface clothed with bristles. A group of 29 cuspules on basal third.

Sternum. Width equal to length. Convex. Clothed with erect black bristles. Margin produced into blunt points between the coxae. Sigilla as in the male.

Legs. (1. 4.) 2. 3. Clothed with black bristles. True scopulae absent. Trichobothria on tibiae, metatarsi, and tarsi. Three tarsal claws. Superior claws with seven teeth. The inferior claw devoid of teeth. Palpal claw with six teeth.

Spines. *First leg.* Femur 0. Patella 0. Tibia: dorsal 0, prolateral 1, retrolateral 0, ventral 1-1-1-2. Metatarsus dorsal 0, prolateral 0, retrolateral 0, ventral 2-1-3. Tarsus: dorsal 0, prolateral 0, retrolateral 0, ventral 1r. *Second leg.* Femur 0. Patella: prolateral 1, elsewhere 0. Tibia: dorsal 0, prolateral 1, retrolateral 0, ventral 2-1-1-2. Metatarsus: dorsal 0, prolateral 1, retrolateral 0, ventral 2-2-4. Tarsus: ventral 1r, elsewhere 0. *Third leg.* Femur 0. Patella: prolateral 1-1, elsewhere 0. Tibia: dorsal 1-1, prolateral 2-3-2, retrolateral 1-1-1, ventral 2-2-2. Metatarsus: dorsal 2-2, prolateral 1-1-1-1, retrolateral 1 at apex, ventral 1-3-3-1-3. Tarsus: ventral 2-2, elsewhere 0. *Fourth leg.* Femur 0. Patella 0. Tibia: dorsal 0, prolateral 2-2-1, retrolateral 1d, ventral 2-2-2. Metatarsus: dorsal 2-2, prolateral 1, retrolateral 0, ventral 1-1-2-1-3. Tarsus: ventral 1-2-2-2-2, elsewhere 0. *Palpi.* Femur 0. Patella 0. Tibia: dorsal 0, prolateral 1-1-1, retrolateral 2-2-2, ventral 1. Tarsus: dorsal v, prolateral 1-1-1-1-1, retrolateral 1-1-1-1, ventral 1.

Abdomen. Yellowish-brown. Clothed with black hairs. Dorsal surface marked with a median black stripe, which becomes narrower posteriorly. Six pairs of greyish-black oblique stripes on the sides. (Text-fig. 1. F.) Ventral surface yellowish-brown with a faint greyish median patch.

Spinnerets. Six. Posterior pair 4.3 mm. long, four-jointed on dorsal surface, three-jointed on ventral surface. The two anterior pairs are short and almost in the same transverse line, immediately in front of the posterior pair. The outer pair two-jointed, the inner pair one-jointed. The inner pair are separated from each other by $5/2$ times their diameter.

Locality. National Park, Tasmania. (3450 feet.) 27th March, 1932.

Field Notes. Both male and female specimens were collected near the southern end of Lake Fenton. The spider makes a simple burrow, lined with silk, but not provided with a lid. The nests are fairly numerous in mossy banks among the deciduous Beeches (*Notofagus gunnii*) and Grass-trees (*Richea pandanifolia*) near the accommodation huts.

Type Specimens. The holotype male and allotype female have been placed in the Australian Museum, Sydney.

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